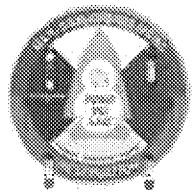


# Fond du Lac Band of Lake Superior Chippewa

## Resource Management Division

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Administration  
Conservation  
Enforcement  
Environmental  
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Fisheries  
Natural Resources  
Wildlife

March 16, 2018

### SUBMITTED ELECTRONICALLY

PolyMet Draft Air Permit Comments – 4<sup>th</sup> Floor  
Minnesota Pollution Control Agency  
520 Lafayette Road  
St Paul, MN 55155-4045

Re: Fond du Lac Band of Lake Superior Chippewa comments and objections to  
PolyMet Draft Air Permit

Dear Commissioner Stine:

The Fond du Lac Band of Lake Superior Chippewa appreciates this opportunity to comment on the PolyMet Draft Air Permit. In these comments, the Band sets out its concerns and objections regarding the draft permit and the actions that the MPCA should take regarding issues raised by the draft permit, and the reasons in support of the Band's position.

The Fond du Lac Band of Lake Superior Chippewa (the Band) is a federally recognized tribe with a Reservation located in northeastern Minnesota that was established by Treaty with the United States as the Band's permanent home. By treaty, the Band retains hunting, fishing and gathering rights on more than 8 million acres of territory in Northeastern Minnesota ceded to the United States government under the Treaties of 1837 and 1854<sup>1</sup>. Band members rely on those rights to hunt, fish and gather natural resources in the Ceded Territory for subsistence, cultural and religious purposes, and the Bands accordingly have a legal interest in protecting natural resources on which those rights depend. The Band provides governmental services to Band members and other eligible persons living on and near the Band's reservation. Among those government functions are those to protect the environment. With regard to air quality, the Band has Treatment as a State status under the federal Clean Air Act for air related activities that take place on or near the Reservation and/or other tribal lands.

<sup>1</sup> Treaty with the Chippewa, July 29, 1837, 7 Stat. 536, Treaty with the Chippewa, September 30, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/ch10648.htm> (last visited Mar. 10, 2014).

As the project proposed by NorthMet would be located directly upstream of the Fond du Lac Reservation, and within the Ceded Territories where Band members exercise hunting, fishing and gathering rights, the Band has a substantial interest in ensuring that the terms and conditions of any air permit issued to PolyMet are effective in protecting air quality. Our comments reflect our review of the draft permit, Technical Support Document (TSD), and TSD Attachments obtained from the MPCA's website. Comments are grouped according to the documents reviewed.

### Class II Modeling Report

With the release of the draft air permit in late January 2018, the Band and the public saw, for the first time, the protocol used by PolyMet and apparently approved by the MPCA for Class II and Class I modeling. The MPCA website for this draft air permit, under a section titled "Class II Air Modeling" provides links to the "Class II Modeling Protocol (Mine Site)" and "Class II Modeling Protocol (Plant Site)" – both of which are dated April 2016 with a follow-up memorandum from PolyMet's consultant, Barr, dated July 2016. The MPCA website also includes a link titled "Class II Modeling Protocol Approval (Plant Site and Mine Site)". This link provides records of MPCA approval of the Class II Modeling Protocol given on August 3, 2016. Copies of these are also reproduced in the Technical Support Documents (TSD) Attachments at pages 834-876 (Mine site) and 877-923 (Plant site). As we describe in detail below, there are serious deficiencies in the Class II modeling. Specifically, PolyMet's Class II Modeling departs from proper practice with regard to inclusion of nearby sources, the removal of receptors on neighboring properties, the use of improper grid spacing for receptors, and the definition of "ambient air boundary".

In addition, while the MPCA website presents the April 2016 Modeling Protocols as the approved Class II Protocols for the Mine site and Plant site, review of the TSD Attachments suggests that the MPCA, in September or December of 2017, may have approved some modifications of these protocols. See TSD Attachments at page 808. These later documents however are not clear. They raise more questions than they answer about the elements of the Class II modeling protocol to be used, and still leave serious deficiencies in the modeling protocol. We discuss those below as well.

### Receptor Spacing (PM-10 and PM-2.5)

- PolyMet, in its Air Quality Dispersion Model Protocol for the Mine Site, AQDM-01-NorthMet Mine Site Protocol, Mine Site Class II, Section F (Receptors) (reprinted in the Technical Support Document (TSD) Attachments, at pages 844-845), states that PM-10 receptors will be spaced at 100 meters (m) along the property line and 500 m at distance. This is inadequate, as illustrated when compared to the recommendations contained in the MPCA's modeling guidance (MPCA Modeling Practices Manual, 2017 – "the Manual"). Table 11 of the Manual sets out the recommended placement for ambient air receptors for a proper NAAQS (National Ambient Air Quality Standards) and MAAQS (Minnesota Ambient Air Quality Standards) analysis. See Manual at page 24, Table 11. That table recommends 10 m spacing between each receptor at the property boundary, 50 m spacing from the boundary out to 1 km, and does not allow 100 meter spacing until evaluating concentrations

1-2 km out from the source. PolyMet, in its Modeling Protocol used receptor spacing of 500 m to evaluate concentrations that were between 1-5 km from the source, whereas the Manual does not recommend 500 m spacing until evaluating concentrations 5-10 km out from the source. Further, the Band could not confirm, from the records provided with the draft permit, that PolyMet's protocol calls for receptor placement between the fenceline and property boundary. These departures from the standards for receptor spacing set out in the Manual are extreme and no justification for them is given in the protocol. Figures J-3 and J-4 in PolyMet's Modeling Protocol further show that the modeling grid for PM-10 does not appear to change in terms of spacing from the fence line to a distance 5 km out. Table 1 below shows the differences between the receptor spacing used by PolyMet, and the receptor spacing set out in the Manual. Please note that in this Section of PolyMet's Modeling Protocol, Items #3 and #5 provide receptor spacing details. However, these two items do not agree in all respects. MPCA does not provide any explanation of the reasons why the recommendations in the Manual were not followed with regard to receptor spacing for this project. Deviations from the guidance contained in the Manual need to be explained.

- PolyMet's receptor spacing is also inconsistent with the MPCA modeling guidance that had been used from October 2004 until September 2016 (since September 2016, MPCA has recommended the spacing that is also set out in the current Manual discussed above.) PolyMet, in its modeling protocol, states that it was relying on the MPCA guidance in effect in 2013 (TSD Attachments at page 844). However, MPCA modeling guidance from October 2004 until September 2016, suggested the placement of receptors every 10 m along fence lines and 25 m along property lines. The righthand column in Table 1 below shows spacing suggested by MPCA from October 2004 until September 2016. These parameters are compared with the middle column, receptor spacing used in the modeling by PolyMet. The italicized rows include distance gradations that are found only in the 2004 guidance. One can see that the PolyMet modeling used receptor spacing that would not have been in accordance with MPCA guidance at any point in the last past 13 years. Note that the October 2004 guidance does not suggest spacing receptors at a distance of 500 m apart until a distance of 2.5-4.5 km away from the boundary, whereas the PolyMet modeling uses this spacing straight out from the boundary. Note that the very latest guidance available when PolyMet submitted its modeling protocol in April of 2016 (Manual, July 2013) was consistent with the October 2004 guidance, and would not have allowed the receptor spacing that PolyMet used. Although PolyMet deviated from the recommendations contained in the MPCA's October 2004 through September 2016 guidance and used fewer receptors spaced further apart, no explanation is provided to justify why this deviation from the recommendations from twelve years' of prior guidance was allowed.

**Table 1**

Location	Spacing/Current Guidance (m)	Spacing/PolyMet (m)	Spacing/2013 Guidance (m)
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<i>Along fence lines<sup>2</sup></i>	---	---	10
Along property line	10	25, 100	25
From 25-250 m	50	50, 100	25
From 300-500 m	50	50, 100	50
From 600-1000 m	50	50, 100	100
From 1200-2000 m	100	500	200
From boundary-1 km	50	50, 100	25-100
From 1 km-2 km	100	500	200
From 2 km-5 km	250	500	500
From 5 km-10 km	500	1000	1000

- The same flaws in receptor spacing occur with the receptors used by PolyMet for PM<sub>2.5</sub> (particulate matter less than 2.5 microns in diameter). PolyMet's AQDM-01-NorthMet Mine Site Protocol, Mine Site Class II, Section F (Receptors) (page 845 of the TSD Attachments), does not follow the recommendations in the Manual. Instead, the model calls for PM-2.5 receptor spacing of 100 m around the ambient boundary. From the ambient boundary out to 1 km, PolyMet uses a range of spacing of 50 m at expected maximum locations and 100 m at other locations, which does not follow the Manual's recommendation of spacing at 50 m for all locations. In addition, PolyMet's spacing of receptors at 500 m from 1-5 km distance from the ambient boundary does not follow the Manual's recommended distance of 100 m from 1-2 km out. The Manual does not recommend spacing of 500 m until 5-10 km out from the boundary. Table 2 below summarizes the substantial difference between the recommendations in the Manual and PolyMet's modeling protocol. Again, the Band was unable to confirm, from the records provided with the draft permit, that PolyMet's protocol calls for receptor placement between the fenceline and property boundary. Similar to the problems with the spacing of PM-10 receptor issues described above, no explanation or justification is provided for why this departure from the Manual was proposed or why the proposal was accepted. In addition, similar to the problems with the spacing of PM-10 receptors, PolyMet's model also deviates from the recommendations set out in the MPCA's guidance that were in effect from October 2004 until September 2016, and no explanation is provided for why such a departure was allowed. This implies that the reason these receptors were placed as they were (fewer receptors placed further apart) was solely to allow the source to model compliance with the PM-2.5 and PM-10 NAAQS/MAAQs, but that compliance might not have occurred if the modeling followed the recommendations in the guidance. Table 2 below shows the substantial differences between the MPCA Manual and PolyMet's Model. Again, note that these deviations are inconsistent with recommendations consistently made through twelve years of MPCA modeling guidance.

<sup>2</sup> Some receptor spacing ranges are found only in the older guidance. These are italicized and a best effort has been made to correlate them to the PolyMet protocol. Where the ranges are not exactly the same, they can be interpolated to the approximate range specified by the old guidance. For example, for a range covering boundary-1 km, that same spacing will cover the ranges from 25-250 m, 300-500 m, and 600-1000 m. Similarly, the range from 1200-2000 m is roughly the same as a range from 1-2 km.

**Table 2**

Location	Spacing/Current Guidance (m)	Spacing/PolyMet (m)	Spacing/2013 Guidance (m)
Along fence lines <sup>3</sup>	---	---	10
Along property line	10	25, 100	25
From 25-250 m	50	50-100	25
From 300-500 m	50	50-100	50
From 600-1000 m	50	50-100	100
From 1200-2000 m	100	12-25, 500	200
From boundary-1 km	50	50-100	25-100
From 1 km-2 km	100	12-25, 500	200
From 2 km-5 km	250	12-25, 500	500
From 5 km-10 km	500	25-50, 1000	1000

- The PolyMet model is further unclear. It raises questions about why Section F #3c states that receptors will be placed at 25 and 100 meters along the boundary if this was not actually done. Combining the receptor spacing information for PM-10 and PM-2.5 on one page (see page 845 of the TSD Attachments) is very confusing.
- There was a possible December 2017 modification to the receptor spacing at the mine site. In a later report, MPCA appears to have approved a modification to the receptor placement at the mine site. That report indicates that the ambient air boundary has been modified from the property boundary line to a smaller area called the "effective fenceline", which we discuss in more detail in the Ambient Air Boundary section below. In connection with this change, MPCA describes a change in receptor spacing, as follows: *"The Mine Site Protocol text stated that the receptor grid would use 100 m spacing from the ambient air boundary (as the boundary was formerly called) out to 1 km. After discussion with the MPCA, the receptor grid spacing from the effective fenceline out to 1 km was changed to 250 m. No changes were made to the receptor density in areas of maximum modeled concentrations."* TSD Attachments at page 808. If this modification has been approved, it reflects an even greater deviation from the recommended spacing in the Manual. The Manual recommends 50 m spacing at the fenceline or facility boundary to 1 km. No explanation is given on the reason why a deviation from the recommendations contained in the Manual is warranted here.

Relief requested. MPCA should not approve the draft air permit until the receptor spacing for this proposed project complies with the recommendations set out in Table 11 of the Manual, and updated modeling is done with receptors that are properly spaced in accord with the recommendations in the Manual. If, however, deviations are to be made, MPCA needs to provide a detailed justification explaining the basis for those deviations and provide the public with an opportunity to review and comment on them before a final decision is made on an air permit.

<sup>3</sup> See Footnote 2.

#### Removal of Nearby Sources (Background Concentrations)

- PolyMet, in AQDM-01-NorthMet Mine Site Protocol, Mine Site Class II, Section J (Nearby Sources), states that some nearby sources were omitted from the Class II PM-10 and PM-2.5 modeling and refers the reviewer to Attachment J. However, as discussed below, these nearby sources were removed improperly due to the incorrect assumption that their emissions are included in background concentrations.
- Attachment J attempts to justify the removal of nearby sources by claiming that background concentration values from the PM-10 monitor in Virginia capture PM-10 emissions from relevant nearby sources. The Band does not see how this monitor can adequately and consistently reflect emissions from Louis Leustek and Sons Inc, Northshore Mining Co – Babbitt, Mesabi Nugget, or Cliffs Erie Hoyt Lakes. Attachment J states that the conditions that lead to worst-case modeling scenarios at the site are those involving low wind speeds and either southerly or northerly winds, and that these sources are captured by the monitor. But how can PM-10 emissions from these facilities be captured by the monitor during low wind speed conditions? One would think this would be the worst time for the monitor to pick these sources up. Likewise, it seems that northerly or southerly winds (see wind rose from Attachment J which indicates that the majority of winds in the area are northerly and southerly) would not be conducive for carrying these emissions to the southwest, which is where the Virginia PM-10 monitor is located.
- The Band believes that the use of data from this monitor is also not clearly representative of background levels in the area because of the great variation in distance of the other major sources in the area from the monitor, which may cause some sources to be over-represented and some to be under-represented. However, rather than make complicated arguments based on meteorological conditions, the Band suggests that it would be better to use data from a different monitor that truly represents background concentrations of this pollutant, and to then model all nearby sources explicitly. The Fernberg monitor operated by the US Forest Service would be a good indicator of true background concentrations, as it is isolated from the immediate impact of emissions from mining sources.

#### Removal of Nearby Sources (Due to Interpretation of Definition of Ambient Air Background)

- In the Results Review Form for PolyMet's Air Quality Dispersion Modeling (AQDM-01) (Dec. 2017) at Section 2 page 3, (TSD Attachments at page 802) MPCA comments that *"The Company provided language in their report to narrate how nearby source contributions were removed from the modeling evaluation. The Company followed an approach whereby they subtracted modeled nearby source concentrations from the nearby source property at and up to the property boundary. This practice is no longer observed in Minnesota. MPCA Management allowed the Company to remove modeled nearby source concentrations from the nearby source property in recognition of a historical modeling practice. The MPCA will expect that any future cumulative ambient air quality modeling will follow the current MPCA*

*Modeling Practices Manual (2017) to address modeled nearby source concentrations. In the event that a modeled exceedence is discovered at a nearby source facility, the MPCA has developed processes to evaluate these situations on a case-by-case basis (See Appendix A of the MPCA Modeling Practices Manual (2017)).* MPCA here confirms that PolyMet used an improper modeling procedure - one that may have been allowed in the past but which was "no longer observed in Minnesota." MPCA then postpones any issues with modeled non-compliance to be dealt with at some later time. This is improper and should be corrected. It adds an improperly modeled new source to an area that already has high levels of PM-10, which both complicates modeling for other facilities in the area and degrades the air quality for the residents who will deal with poor air quality. In addition, the records made available on this matter fail to provide any justification for this departure from guidance set out in the Manual. The decision here wholly: fails to explain when the alleged "historical practice" that PolyMet used was allowed under MPCA modeling protocols; fails to identify the guidance or other policy vehicle that allowed this "historical practice"; fails to address when the "historical practice" was ended and the reasons why it is no longer recommended for use; and fails to describe what factors were used to allow PolyMet to deviate from the guidance set out in the current Manual and instead rely on an unidentified and since abandoned "historical practice".

- MPCA's decision here to allow PolyMet to use a "practice that is no longer observed in Minnesota" raises questions about whether MPCA has made similar exceptions in other air permits in this region under which the applicant was allowed to remove nearby sources. If this has been allowed elsewhere, information should be provided to identify all such other permits — as this practice and the deviation from what is recognized as proper practices will lead to incorrect conclusions about compliance with NAAQS/MAAQs and requires a more comprehensive, and corrected, analysis. MPCA should require that PolyMet correct its modeling to address nearby source contributions in accordance with the recommendations of the Manual, and the terms of any air permit for this project should be based on the corrected model. If, however, deviations are to be made, MPCA needs to provide a detailed justification explaining the basis for those deviations and provide the public with an opportunity to review and comment on them before a final decision is made on an air permit.
- The MPCA's statement that *"The MPCA will expect that any future cumulative ambient air quality modeling will follow the current MPCA Modeling Practices Manual (2017) to address modeled nearby source concentrations."* cannot be enforced, as it is not part of a regulation, nor is it official guidance. It is a statement made in a 1,500 page technical document that few people will read. MPCA's statement further illustrates and confirms that its decision to allow this for PolyMet is not supported by any facts or reasoned justification and is wholly arbitrary. The remedy for this draft permit is to require that the proper modeling be done before any air permit is issued. And to ensure future compliance, the MPCA's Manual should be updated to explicitly prohibit the type of modeling that PolyMet conducted, otherwise this assurance is meaningless.

- Further comments on the problems arising from the removal of nearby sources can be found in this letter, under Ambient Air Boundary.

#### Plant Site Class II Modeling Protocol

- The same flaws in the spacing of receptors that occurs with PolyMet's air quality dispersion model protocol for the mine site also occurs in PolyMet's Air Quality Dispersion Model for the Plant Site, AQDM-01-NorthMet Plant Site Protocol, reprinted in the Technical Support Document (TSD) Attachments at pages 886-887 (Section F Receptors). Receptor placement at the plant site deviates considerably from the spacing for receptors recommended in the Manual. Table 3 below shows the very substantial differences between PolyMet's receptor placement compared to what the Manual recommends. As a result, PolyMet used a fraction of the number of receptors recommended, placed at far greater distances from one another, undermining their effectiveness in measuring NAAQS/MAAQS. Large Figure 3 at page 897 of the TSD Attachments further shows the large open spaces between receptors. Again, the Band was unable to confirm, from the records provided with the draft permit, that PolyMet's protocol calls for receptor placement between the fenceline and property boundary and no explanation is provided to justify the deviation from the MPCA's guidance. In addition, similar to the problems with the spacing of receptors for the mine site, PolyMet's model also deviates from the recommendations set out in the MPCA's guidance that were in effect from October 2004 until September 2016, and no explanation is provided for why such a departure was allowed.

**Table 3**

<u>Location</u>	<u>Spacing/Guidance (m)</u>	<u>Spacing/PolyMet (m)</u>	<u>Spacing/2013 Guidance (m)</u>
<i>Along fence lines<sup>4</sup></i>	10	10	10
Along property line	10	25, 100	25
From 25-250 m	50	50, 250	25
From 300-500 m	50	50, 250	50
From 600-1000 m	50	50, 250	100
From 1200-2000 m	100	500	200
From boundary-1 km	50	50, 250	25-100
From 1 km-2 km	100	500	200
From 2 km-5 km	250	500	500
From 5 km-10 km	500	1,000	1000

- The same problem exists with regard to receptor spacing for cumulative impacts (see page 887 of TSD Attachments). Table 4 below shows the difference in receptor spacing that is set out in the Manual from what PolyMet used for cumulative impacts. PolyMet's Large Figure 4 at page 898 of the TSD again illustrates the large spaces between receptors. PolyMet's

<sup>4</sup> See Footnote 2.



model also deviates from the recommendations set out in the MPCA's guidance that were in effect from October 2004 until September 2016, and no explanation is provided for why such a departure was allowed. Phrases used to describe the spacing, such as "as necessary", "very dense", and "less dense" are not well defined, although one mention of a 500 m grid from the boundary out to 5 km is used. The protocol also calls for "receptors... at 1 km intervals out to the extent of the grid", apparently measured from the boundary, although this is not clear. Again, the Band was unable to confirm, from the records provided with the draft permit, that PolyMet's protocol calls for receptor placement between the fenceline and property boundary.

**Table 4**

<u>Location</u>	<u>Spacing/Guidance (m)</u>	<u>Spacing/PolyMet (m)</u>	<u>Spacing/2013 Guidance (m)</u>
<i>Along fence lines</i>	----	----	10
Along property line	10	100	25
<i>From 25-250 m</i>	50	100	25
<i>From 300-500 m</i>	50	100	50
<i>From 600-1000 m</i>	50	100	100
<i>From 1200-2000 m</i>	100	"as necessary"	200
From boundary-1 km	50	1000	25-100
From 1 km-2 km	100	"as necessary", 500, 1000	200
From 2 km-5 km	250	"as necessary", 500, 1000	500
From 5 km-10 km	500	"as necessary", 500, 1000	1000

- Section F of this modeling protocol refers to Attachment J when discussing cumulative impacts grid spacing, (see page 887 of the TSD Attachments), stating "As described in Attachment J, the extent of the cumulative impacts assessment grid will vary by pollutant, but all pollutants will be evaluated along the boundary". However, Attachment J does not give any further information as to what distances are meant by "as necessary". See TSD Attachments at pages 909-915. If this information is indeed given, it is difficult to find, as no reasonable cross-reference was provided. Here too, specific information is needed about the receptor spacing that was done, and to the extent the spacing deviates from the MPCA guidance, an explanation needs to be provided to show the reasons why this was done.
- MPCA should not approve the draft air permit until the receptor spacing for this proposed project at the plant site, and the mine site, including receptors for cumulative impacts analysis, follows the recommendations set out in the Manual, and updated modeling is done with receptors that are properly spaced in accord with the recommendations set out in the Manual. If, however, deviations are to be made, MPCA needs to provide a detailed justification explaining the basis for those deviations and provide the public with an opportunity to review and comment on them before a final decision is made on an air permit.

#### Class I Modeling Protocol

Table S6-1 shows that the SIL in the BWCA is 0.290, very close to the SIL of 0.3. See TSD Attachments at page 1184. This is reason for concern and calls for careful review and reassessment of the modeling protocol, including consideration of whether it was appropriate to assume 90% control of road dust and to use plume depletion for fugitive sources (see comments below on these issues).

#### Ambient Air Boundary

- PolyMet failed to model ambient air concentrations at receptors on its own property because it incorrectly defined the “ambient air boundary.”
- “Ambient air” is defined as “that portion of the atmosphere, external to buildings, as to which the general public has access.” 40 CFR 50.1(e). As the MPCA explains in Appendix D to the Manual, the rules for defining a “ambient air” for purposes of the placement of air quality dispersion modeling receptors has been well-established by EPA forty years. As MPCA states: *“In the 1980’s the Environmental Protection Agency (EPA) guided receptor placement modeling procedures through what has become EPA’s long-standing ambient air policy: ‘for modeling purposes, the air everywhere outside of contiguous plant property to which public access is precluded by a fence or other effective physical barrier should be considered in locating receptors. Specifically, for stationary source modeling, receptors should be placed anywhere outside inaccessible plant property. For example, receptors should be included over bodies of water, over unfenced plant property, on buildings, over roadways, and over property owned by other sources.’”* Manual, Appendix D at 1-2 (citing EPA Memorandum from Regional Meteorologists, Regions 1-X to Joseph Tikvart, Chief (MD-14) dated May 16, 1985). MPCA further explains that “EPA has been consistent in the expectation of receptor placement for NAAQS modeling,” *Id.* at 2, and that: *“Based on EPA policy interpretations of ambient air and public access control from the past three decades, the following key points are considered most relevant when considering the placement of receptors in a NAAQS modeling demonstration:*
  - 1) *The federal definition of ambient air is defined at 40 CFR 50.1(e) as “that portion of the atmosphere, external to buildings, to which the general public has access.”*
  - 2) *EPA has exempted a source’s area from ambient air when: (1) the source owns or controls (e.g., leasing) the land or property; and (2) precludes public access to the land or property using a fence or other effective physical barrier. The general public must be protected from areas of the facility property (owned or leased) that have modeled exceedances of the NAAQS.*
  - 3) *For the purpose of a NAAQS analysis, EPA expects receptor placement throughout the facility property if no approved fencing or effective physical barrier exists.*

MPCA further adds that: *“The EPA has applied the Federal definition of ambient air for the past four decades, clarifying their interpretation of public access and control over time. EPA has maintained fencing to be a chain-link fence, or any fencing of suitable height, to restrict public access and expects any proposed effective physical barriers to be as restrictive.”*

Manual Appendix D at 2 citing Email from Randall Robinson, EPA Region 5, to Jim Sullivan, MPCA, dated March 27, 2017.

- The ambient air boundary used by Polymet for its Class II air dispersion modeling is not consistent with these requirements. According to the records provided with its approved April 2016 modeling protocol, PolyMet largely used its property boundary line and only undertook air dispersion modeling along the perimeter of its property boundary to points beyond that boundary. See TSD Attachments at pages 853, 854, 873, 874 (mine site) and 897 (plant site). This is contrary to EPA and MPCA requirements as the boundary of PolyMet's property is largely not fenced and does not have effective physical barriers that would serve to prevent public access<sup>5</sup>.
- A Technical Memorandum written to the MPCA from PolyMet's consultant Barr (dated July 17, 2016 – at page 949 of the TSD Attachments) seeks to justify PolyMet's position, but it instead shows that the ambient air boundary was not properly defined. This memorandum explains that with regard to the plant site, although some areas will be controlled by a fence or gate, much of the perimeter is not fenced. PolyMet and Barr instead assert that the lands are not accessible to the public because the eastern and northern borders, as well as the western portion of the plant site, are located generally within wetlands, consisting of bogs and swamps, which they contend provide a natural barrier against trespassing (although PolyMet also notes that these lands do include a small upland area that is periodically logged.) Memo at 2, 3. PolyMet and Barr take the same position regarding the mine site – claiming that because the northern border and southeastern borders of the mine site are located in large areas of wetlands (but with some uplands), they present a significant travel barrier. PolyMet and Barr also note the lack of roads to further support their claim that these features prevent public access. PolyMet recognizes that they are obligated to preclude public access in areas where exceedances of NAAQS/MAAQs are likely to occur, and expresses a commitment to do so prior to mine operations by measures including no trespass signs and security patrols in areas where access is not precluded by either gates and fences, or natural barriers.
- The fact that much of the land along the perimeter of the plant and mine sites are wetlands does not make them a sufficient physical barrier to allow such lands to be excluded from modeling as ambient air. Although wetlands would not be accessible by persons traveling on-foot during the spring, summer and early fall, wetlands can and in fact are accessible when persons travel by canoe or kayak. And during winter, wetlands are frozen and accessible by hiker (with or without snowshoes) or cross-country skiers or snowmobiles.

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<sup>5</sup> Maps that were submitted later to the MPCA, with December 2017 reports, regarding the cumulative NAAQS receptor grid, are inconsistent on which boundary was used and for what purpose. One shows receptors only from the property boundary out (TSD Attachments at page 818), while others suggest cumulative modeling used the smaller "effective fenceline" as the ambient air boundary (TSD Attachments at pages 819-826). The differences are not explained, and prevent the public from knowing what ambient air boundary was in fact used for modeling. Clear information on these issues needs to be provided to the public, and the public given an opportunity to comment before a decision is made on an air permit.

Longstanding EPA policy recognizes this, and in fact requires that air dispersion modeling receptors “be included over bodies of water.”

- Likewise, the use of no trespassing signs is not sufficient to treat the property as non-ambient air. EPA has consistently and clearly required that public access be prevented by a fence or other physical barrier. Absent these, if the general public can either intentionally or unintentionally enter the property, the property must be included within the area evaluated as ambient air. That the person entering the property may be doing so in trespass does not change the result. Minnesota Rules also make it clear that even trespassers are part of the general public who are to be protected by the ambient air boundary. Minn. R. 7009.0020. The TSD incorrectly describes this Minnesota Rule as if the ambient air boundary does not apply to trespassers. TSD at 115. That is not correct and misreads Minn. R. 7009.0020.
- The importance of properly defining the ambient air boundary also arises because a historic sugar bush site exists near the property which has been recognized as a traditional cultural property of the Chippewa Bands and eligible for listing on the National Register of Historic Places. PolyMet is well aware of this as the importance of this site and the need to protect it and provide for Chippewa access to use it has been the subject of considerable discussion with the company and the co-lead agencies on this project for many years. This is reflected in a number of documents, including the Summary Report of Cultural Resource Identification Efforts, Determinations of Eligibility, and Effects Determinations for the NorthMet Project, St. Louis County, Minnesota, USDA Superior National Forest & US Army Corps of Engineers, St. Paul District, 12/11/2013. The Tribes have also, throughout these proceedings, sought to ensure that they and their members would have continued access to this site. Although a final agreement has not yet been reached regarding specific terms for Tribal access, measures to mitigate potential harm to the sugar bush are the subject of a Memorandum of Agreement between PolyMet, the Minnesota State Historic Preservation Office, the Advisory Council on Historic Preservation, the US Forest Service and the Army Corps of Engineers made in December 2016. In addition, that Memorandum of Agreement expressly contemplates that steps will be taken by which the Chippewa will have access to this site so that the Bands and their members can engage in traditional practices of gathering and sugaring as well as maintenance and conservation of this irreplaceable living cultural resource. It is worth noting that the Summary Report of Cultural Resource Identification Efforts, Determinations of Eligibility, and Effects Determinations for the NorthMet Project, St. Louis County, Minnesota states that “the project would meet ambient air quality at the Mining and Plant Site property boundaries” and that commitment needs to continue to apply to the sugar bush site given the December 2016 MOA and even though the site needs to be fenced in order to protect this irreplaceable historic and cultural resource.
- For the company and the agencies to move ahead with modeling under the assumption that no one will ever access this historic site is disingenuous and contrary to the express purpose and intent of the December 2016 MOA.
- PolyMet improperly removed receptors from nearby sources outside its property and its model is flawed for this reason as well. In addition to failing to place receptors on its own

property, PolyMet also removed receptors from nearby sources. This is discussed in a memo from Barr Engineering to the MPCA (dated January 3, 2018) (page 829 of the TSD Attachments). In discussing the removal of receptors from nearby sources, Barr argued that any nearby source can impact air quality on another nearby source, but not on its own land. If this is indeed the reasoning behind this action, is not supported by either MPCA nor the EPA guidance or policies.

- PolyMet, in (Section 5, Attachment 7, Class II Modeling Report (Page 811 of the TSD Attachments) also discusses this methodology, but again no information is offered regarding the boundaries of these neighboring properties and whether they might be adequately fenced. These properties cover large areas and it is hard to believe that they are completely fenced and that these facilities are able to maintain and police these fences against people who want to gain access for one reason or another. Nothing in the MPCA Manual gives PolyMet the right to model or not model based on boundaries of other properties. This approach raises substantial questions about the model itself, and if allowed, would establish a dangerous and improper precedent.
- MPCA apparently, but improperly, approved the removal of these nearby source contributions from the model. As set out in the Overall Status of Results section of Attachment 7 (Class II Modeling Report), it is stated that *"Second, on July 26, 2017, the MPCA Air Managers agreed to allow the Company to remove nearby source contributions from nearby source property, irrespective of whether public access was controlled or not, in recognition of a historical modeling practice. The MPCA Management approval was unique to this situation. The nearby source modeling practice described in this report will not be acceptable for any future cumulative ambient air quality dispersion modeling demonstrations."* There are a number of troubling phrases in this statement which undermine the MPCA approval. First, the statement that: *"...irrespective of whether public access was controlled or not"* suggests that the MPCA did not know or was not convinced that public access is truly controlled in this situation. Second, the statement suggests that the answer to that question didn't (and doesn't) really matter – although it does under the law. Third, the assertion that this *"...was unique to this situation"* does not address what factors made this situation unique amongst all of the air permits that are issued annually. Fourth, the statement that this *"...will not be acceptable for any future...modeling demonstrations"* simply proves that this approach is so unacceptable that it will never be repeated. MPCA does not describe what factors were considered in allowing this facility to take an approach at the MPCA so clearly disapproves of, and the removal of these nearby sources should not have been approved.
- This same report states that *"For all pollutants, cumulative impacts were assessed on all neighboring properties with the impacts due to emissions from each neighboring facility excluded from the receptors within the facility's property boundary"* and claims that *"This methodology is consistent with the EPA guidance on ambient air ...."* See Overall Status of Results section of Attachment 7 (Class II Modeling Report). Because of the flaws in the way the NAAQS/MAAQS PM-10 modeling was conducted, we do not agree that "the only nearby

source expected to potentially have significant overlapping impacts with the Mine Site is the Northshore Mine. We believe that the nearby source originally identified by the MPCA's square root mean distance tool (TSD Attachments at page 867) will also impact the NAAQS/MAAQS. Proper modeling of these sources may indicate different locations for these monitors to be placed (see Section D1-2.1.3). Also, estimates of annual snow cover should reflect predictions for a warmer climate in the future. It is unclear whether this is the case. Snow cover will serve to reduce fugitive dust emissions. It is also unclear whether the wind rose used in modeling is appropriate for the changing climate.

- According to a conversation with a MPCA modeler<sup>6</sup>, one of the nearby sources removed from modeling was an old stockpile left from the days of LTV operation at this site. Since this stockpile is not active, there is less chance of particulate being entrained from its surface than from an active stockpile. If work on this stockpile is started up again, the facility should re-model for NAAQS/MAAQS, Class 1, and Class 2 increment. This condition should be placed in the draft permit.
- Also the Overall Status of Results section of Attachment 7, states: *"Lastly, in the event that a modeled exceedance is discovered on a nearby source property, it should be submitted with the modeling demonstration, along with a contribution analysis to determine if the Company is below the SIL (Significant Impact Level). If the Company is below a SIL value at the receptor(s) that exceed the applicable NAAQS, then the Company may complete their permit action. If the Company has modeled a greater than a SIL value at a nearby source receptor where a modeled exceedance exists, controls or limits may be necessary. The nearby source may also have obligations to reduce their contribution to the modeled exceedance."* The records provide with the draft permit do not indicate whether the MPCA has seen or has knowledge of any modeling that implies or demonstrates that emissions from PolyMet may cause or contribute to an exceedance at any nearby source receptor, for any criteria pollutant. This information needs to be provided.
- The Ambient Air Boundary Control Plan is not adequate. The facility is required to develop an Ambient Air Boundary Control Strategy- Implementation Plan. It appears that a proposed plan is submitted as part of the TSD Attachments (pages 1117-1151). This plan, and the draft permit at page 797, indicate that PolyMet has revised the Ambient Air Boundary so that includes part of the mine site and plant site from a smaller area called the "effective fenceline" extending to and beyond the property boundaries. See TSD Attachments at page 1138. The use of this "effective fenceline" is an improvement since it will require NAAQS/MAAQS compliance over a larger area, but it still has many of the same flaws as when the ambient air boundary was based on the property boundary lines. It incorrectly assumes that wetlands will prevent public access and therefore relies on wetlands as part of its "effective fenceline". See TSD Attachments at page 1133. But as discussed above, wetlands are still publically accessible by canoe or kayak or, during the winter, by hikers, skiers, or snowmobilers. While some part of the "effective fenceline" would be fenced or gated, in other areas, control is to be done only by posting no-trespass signs and security

<sup>6</sup> Conversation with Jim Sullivan, MPCA, on February 28, 2018.

patrols. As to these, the Plan is written in only general terms. It does not appear to set any specifics for the items it will contain. For example, there is no requirement set on frequency of patrols or even any requirement for PolyMet to set such a number. As a result, in addition to the error in defining the “ambient air boundary,” and without waiving our objection to the “ambient air boundary” used by PolyMet, the Plan itself is not sufficiently detailed to prevent public access.

- According to page 208 of TSD Attachments, PolyMet is not required to report fenceline breeches to the MPCA unless six such breeches occur within a 12-month period. Only if a 6<sup>th</sup> breach occurs (and is observed) is the facility required to submit a report to the MPCA. Since the facility is not actually installing a fence that would fully surround the perimeter of the mine site and plant site, but is relying on wetlands, no trespassing signs, and security patrols, any draft permit should be revised to report all breeches to the MPCA. This will allow the MPCA to assess whether the so-called “effective fenceline” is truly effective or whether changes need to be made.
- The draft permit (see page 56) would allow PolyMet to extend the “effective fenceline” outward toward property boundaries, as long as they notify the MPCA 30 days prior to making the extension. No details are given as to what factors would go into this decision nor what impact such an extension would have on the modeling performed for the facility. There is also no opportunity for input by the MPCA, the general public or other regulatory authorities. The draft permit should require a review and approval process, including a list of factors that would contribute to any decision by MPCA to approve this expansion, any modeling or monitoring that will be done with regard to this decision, and should require a public comment period before any decision to allow the change is made.
- This proposed permit condition effectively extends the potential area of non-compliance to cover an even larger area than what is currently proposed. This provision indicates that PolyMet believes there may be a need in the future to address areas that cannot model or monitor compliance with the NAAQS/MAAQs or other standards. The ability to extend the “effective fenceline” outward at will also raises questions about how well-controlled this boundary really is.

Relief requested. For all of the reasons set out above, the draft air permit should not be issued until the ambient air boundary for the plant site and mine site is properly defined consistent with longstanding EPA requirements, and modeling done based on a proper delineation of the ambient air boundary which includes receptors both within PolyMet’s property and outside its property at nearby sources.

#### TSD Attachments, Attachment 7, Class II Modeling Report (December 2017)

- In this report on the status of the Class II Modeling, MPCA, at page 802 of the TSD Attachments, Section 1, states: *“Large Figure Q4-11 Annual PM2.5 NAAQS presents findings for the 24-hour PM2.5 NAAQS rather than the Annual standard. The MPCA has reviewed the PM2.5 Annual NAAQS modeling files and concluded that the proposed facility will comply with the applicable standard; however, this figure should be remedied for the final air quality*

*permit record.*” The MPCA also shows the status of this as “incomplete.” These statements are unclear and an explanation is needed to clarify what MPCA means and how the MPCA reached the conclusion that this requirement was met. In addition, since MPCA also states that “this figure should be remedied,” the corrected information needs to be provided and made available for public review and comment before any final decision is made on an air permit

#### TSD Attachments, Attachment 7, Class II Modeling Report – Cumulative modeling

- This report also seems to address cumulative modeling (see Large Figures Q4-5 through Q4-13) (TSD Attachments at pages 818-826). However the spacing of the receptors for this modeling is not clear. An explanation is needed, as well as an explanation of how the protocol approved for this modeling compares to MPCA modeling guidance. If deviations from the guidance were made, a justification also needs to be provided.

#### Fiber Monitoring Plan

- The Fiber Monitoring Plan (TSD Attachments at pages 1496-1520), allows monitoring to be conducted “after operations begin at the Plant Site for a period to be determined”. TSD Attachments at page 1501. The Band believes that monitoring should be contingent upon operation of not only the Plant but also the Mine Site. Whenever operations begin at either site, monitoring should be conducted.
- The draft permit contains provisions for fiber monitoring but doesn’t contain any criteria for how long monitoring will continue. See Draft Permit at page 64. There is no mention in either the permit or the TSD or TSD Attachments of how or whether monitoring can be discontinued. Instead, the plan simply leaves this “to be determined”. Therefore, there is nothing to stop the facility from ending the monitoring program at any time or from moving the monitor. The permit or the plan should either require that monitoring occur throughout the time that the mine or plant site are in operation, or should detail criteria under which MPCA might allow the discontinuance of the fiber monitoring. These criteria should be subject to public notice and comments.
- The draft permit requires the facility to develop and implement an Ambient Fiber Monitoring and Quality Assurance Plan but does not require the facility to provide this plan to the MPCA. See Draft Permit at page 64. Thus, neither the MPCA nor the public will not have an opportunity to review the plan and address any deficiencies before monitoring begins. This lack of agency and public input makes this monitoring effort meaningless, as the results may be indefensible.
- The draft permit does not require the facility to send fiber monitoring reports to the MPCA on any type of regular basis. The draft permit only says that the results must be provided to the MPCA within 30 calendar days of a request. This improperly shifts the burden on MPCA personnel, who are busy with other things. The facility should be required to report their findings to the MPCA within 30 days of receiving the results from the lab. These results



should also be made known publicly and provided to the Minnesota Department of Health and University of Minnesota for their on-going fibers study.

- The draft permit should also include action levels that would trigger further review or an examination of potential problems that may warrant a response to reduce or eliminate the problem. The information on page 131 of the TSD might help suggest some action levels, and the MPCA should use that information in consultation with the Minnesota Department of Health and the University of Minnesota which are engaged in on-going studies to develop action levels for these fibers which are incorporated into any air permit for this project.
- The fact sheet title Fiber requirements in the PolyMet air permit, (found on the MPCA's PolyMet website) dated February, 2018, states that the Special Purpose Monitors to be placed to measure particulate levels associated with fugitive dust will be used as a way to evaluate the effectiveness of particulate/fiber controls. Since the Special Purpose Monitoring Plan is deficient (see section below) it is not an acceptable means of evaluating whether fibers are being adequately controlled.
- Revisions should be made to the draft permit and PolyMet's proposed monitoring plan to address these issues before any air permit is approved.

#### Special Purpose (PM-10) Monitors

- Permit requirements for PM-10 monitors start on page 66 of the draft permit. The Band's first comment regarding these monitors is that an additional monitor should be placed beyond the ambient air boundary to protect the general public from excess emissions, especially given the very large amount of particulate emissions expected from this source and the inadequacy of the modeling performed.
- The draft permit does not adequately address relocation of these special purpose monitors. The Special Purpose Monitoring Plan (TSD Attachments at pages 1454-1495), states that "PolyMet may elect to add additional monitors or periodically relocate monitors to further address seasonal variation in the prevailing wind direction and/or to address differences in the monitored PM-10 concentrations versus that were estimated by modeling." Plan at page 5. The paragraph further states that "Periodic relocation of the monitors will be permissible because of their status as Special Purpose monitors." The MPCA will review proposed monitoring sites and approve or suggest options, as MPCA staff finds appropriate. The Band disagrees with this approach. While these monitors are not intended to demonstrate compliance, past experience with mine sites has shown that fugitive emissions can exceed the NAAQS/MAAQs. While the MPCA may pre-approve monitoring locations, the decision of when and where to relocate a monitor is obviously made on a case-by-case basis and should not be treated by an "off-the-shelf" decision making process, as seems to be suggested here. There are no criteria listed for the source to evaluate to determine where the culpable emissions are coming from, nor is there any type of decision tree showing how that decision will be made. While potential sites can be identified ahead of time, some technical demonstration needs to be made to prove that a change in monitor location is likely to correctly identify the true source of excess emissions. While the MPCA is to be allowed the

opportunity to review such a change before it occurs, MPCA approval is not required. The fact that very few provisions regarding this process are included in the draft permit allows the facility to essentially move monitors around at will. The draft permit and the plan should require MPCA approval in advance for any such changes, and should detail criteria for considering such changes.

- Section D1-3.2 of the Monitoring Plan (TSD Attachment at page 1464) states that GIS tools will be used to identify candidate monitoring and meteorological sites. It is unclear exactly what tools are being referred to, or why previously performed modeling results would not be used for this purpose. Modeling results would be the most effective method of determining where peak emissions could expect to be found and the plan should be revised to do this. Without knowing what GIS tools the facility is proposing to use or how they are proposing to use them, no public input can be given on the adequacy of their use.
- While Section D1-4.5 of the Monitoring Plan discusses the discontinuation of this monitoring program, it does not list any criteria the MPCA will use to determine whether it is appropriate to issue a permit amendment allowing the discontinuation of this program. This could apparently happen at any time for any reason. This issue is not addressed in the draft permit so it is unclear to the Band how the MPCA plans to deal with this situation in actuality.
- The draft permit and Section D1-4.6 (Table D1-4-1) of the Monitoring Plan list proposed action levels whereupon PolyMet will review the monitoring data to evaluate the cause of elevated results and take action. While the Band agrees that Action Level 1 (AL1) is a reasonable level for requiring some type of action, there really is no requirement that PolyMet do anything to address the situation if this level is reached. The Action uses words such as "Appropriate corrective action" and "if warranted" without defining these terms. There is also no reference to the Fugitive Emissions Control plan that the facility was required to write. It is unclear why this plan is not directly referenced and means that the facility doesn't even have to consider it when deciding what action might be "appropriate" or "warranted". Here too, the MPCA should define these terms, and require that the facility consider the Fugitive Emissions Control Plan when assessing what actions are appropriate or warranted.
- The Band believes that the degree that the air quality is allowed to deteriorate between AL1 and AL2 is excessive. AL2's associated "Action" also uses words such as "if warranted", which have no given definition.
- The Band is also concerned about AL3, which allows the 24-hour NAAQS for PM-10 (150 ug/m<sup>3</sup>) to be met or exceeded for 3 days before the MPCA is notified, and allows 60 days to pass with no further action other than performance of a root cause analysis. While a root cause analysis is an appropriate requirement, the facility should be required to implement items from its Fugitive Emissions Control (FEC) plan while this analysis is being performed. A time period of midnight-to-midnight is also specified for AL3, but not justified or explained. An Action Level at some percentage of the 24-hour NAAQS should be added as a more precautionary level so that emissions are not allowed to reach the level of the NAAQS before action is taken. The Band suggests 85% of the NAAQS as a better Action Level.

- The draft permit and the Monitoring Plan also allow eight days of PM-10 concentrations at or above the NAAQS to occur on a 12-month rolling sum before a root cause analysis is performed. Again, although the FEC plan is mentioned, there is no firm requirement for PolyMet to implement actions from its FEC plan during this time. Further, there is no justification offered for allowing the facility to meet or exceed the NAAQS for this time period before such action is taken. Although a footnote is included, an examination of the instances that this footnote references shows that one is a Federal Land Manager management tool that is used to address visibility, not health based standards. The other use of the 98<sup>th</sup> percentile worst case day per year is used for PM-2.5, not PM-10.
- In addition to allowing eight days' worth of exceedences of the NAAQS per year, both the draft permit and the Monitoring Plan divide the potential sources of PM-10 emissions into five source groups and state that "If the 12-month rolling sum number of days with action level events for *a source type* (italics added) equals eight, the Permittee shall conduct a root cause analysis..." This means that exceedences of the NAAQS will be allowed until it can be confirmed that the exceedences all come from one of the source groups before any real action is taken. This approach could allow up to 40 exceedences in a 12-month period before action is started. This is unreasonable, as the NAAQS do not allow for consideration of which source contributions are allowed to count toward violations and which are not.

Relief requested: The draft permit and the proposed Monitoring Plan should be revised to address and cure the problems set out above with revised drafts made available to the public for review and comment before an air permit is approved.

#### Haul Roads and Plume Depletion

- Attachment 6 (TSD Attachments at pages 792-799 – MPCA memo) describes haul road dust control efficiencies, as estimated by the MPCA. This memo describes three different levels of effort in controlling dust and the corresponding control efficiencies that can be assumed for each level. PolyMet is proposing Level III-A and III-B plans, which assume 80% and 90% control of dust, respectively.
- The draft permit should contain requirements to perform a "ground truth" analysis of road emissions and the control efficiencies that were assumed for these roads should be contained in the permit. The permit should contain requirements for evaluating the density and size fraction of the road dust, using ASTM and statistical sampling methods. This is a very important issue, as modeled compliance with the PM-10 NAAQS depends on the use of 80-90% control for haul roads.
- On page 793 (TSD Attachments) the MPCA states "Companies will assess which of their road beds are overburden and which are taconite or waste rock and differentiate these for the purposes of modeling/permitting/inventory submittals so that the appropriate emission factor is used. By certifying inventory, modeling, and permitting submittals, the company is verifying the composition of road bed material and is certifying to the accuracy of this

information.” This supports the Band’s claim that the draft permit needs to be updated to require the submittal of this information.

- In addition to including test provisions for road dust, the permit should also include a deadline for this analysis to be performed and reports sent to the MPCA, as well as action levels that would trigger re-modeling if the assumptions made regarding road dust control efficiencies cannot be supported by performance testing. The Band suggests that results showing more than a 10% variation in density and/or size fractionation should trigger re-modeling. The reports on these tests should be made public.
- Page 795 of this document states that “Level III-A Plan – The following activities will be carried out and the following information will be provided for Level III-A Plan. Information for 1-3 will be updated annually with the emission inventory submittal...” Please address how these requirements are written into the draft permit, including what emission inventory is referenced and how often it is updated.
- Section 1 of Attachment 7 at page 801 (Class II Modeling Report) states that “...future cumulative plume-depleted PM10 air quality dispersion modeling will be conditioned on the validation of plume depletion characteristics (particle size, particle density, particle fraction) through field assessment. Details of the field assessment approach will be included in the air quality permit.” However, no such requirement can be found in the draft permit.
- Section 3.2.3 of the TSD states that “...if the predicted ambient impacts (including background) are less than 95% of the NAAQS or MAAQS and the facility maintains an appropriate and enforceable fugitive dust control plan, fugitive dust from paved roads need not be included in the modeling”. Since the Band believes that the PM-10 (and possibly PM-2.5) modeling for this source was done incorrectly (see Removal of Nearby Sources sections of this letter), we cannot agree that the modeled emissions are less than 95% of the NAAQS or MAAQS. Section 3.2.5 suggests using the results of the Special Purpose Monitoring Plan to confirm the effectiveness of the fugitive emission control measures. However, we have already commented, the Band finds issues with the effectiveness of the Special Purpose Monitoring Plan, including the potential for NAAQS to be exceeded up to 40 times before any action is taken. Although modeling assumptions can be further evaluated if the root cause analysis does not identify ways to lower emissions, there is no guarantee this would happen in a timely manner or that any changes would be made at all.

#### Draft Permit

There are a number of requirements that are referenced in the TSD but that do not appear in the draft permit. These are:

- Page 58 of the draft permit requires modeling to be updated if there are any changes to autoclave emissions “upon initial start-up date”. This provision does not have any consequences in case of any modeled violations, but would allow the facility to continue to operate the autoclave indefinitely, even if any compliance issues arise due to changes in emissions. There is also no requirement for the AERA to be updated based on the results of this modeling, which could lead to issues with toxic or metals emissions.

- Given the high public interest in this project, semi-annual and annual monitoring and deviation reports should be posted for the public to review.
- For fugitive emission readings, on page 73 of the draft permit, the reference of 40 CFR 60.675(c) should be 40 CFR 60.675(e).
- There appear to be discrepancies between the TSD and the draft permit as to during which months the facility may operate between 6:00 am and 6:00 pm. In the draft permit, these hours appear to be allowed only in the months of November, December, January, February, March and April but page 541 of the TSD Attachments allows these hours of operation in the months of April-October.
- The draft permit (page 47) gives the facility 60 months after permit issuance to “start construction of this equipment” and references Appendix F, which lists what seems to be the entire range of functions at the proposed facility. This is a deviation from the usual permit condition allowing a facility 18 months to construct. It is also inconsistent with the rules under which a permit becomes invalid if construction is not commenced within 18 months after the permit becomes effective. See 40 C.F.R. 49.155(b). The rules make limited exceptions. For example, a facility may request one 18 month extension of this deadline and must do so well in advance of the expiration date of the permit.
- No justification is provided for the departure from the rule.
- The departure from the rule is problematic because many of the assumptions, calculations, or models used in writing this permit could change over a period of five years. These include (but are not limited to): updates to the ambient air quality models used; updates to acceptable modeling protocols and the use of default settings in the models; control equipment performance; and AP-42 emission factors. The draft permit does not make allowances for any updates to be made in any of these areas if construction extends beyond the traditional 18 months.
- The TSD, Section 3.2.6 (page 119) contains Class II Remodeling Requirements based on emission rates that are 25% of the significant emission rate threshold. However, the facility should also remodel: if the road dust analysis shows more than a 10% variation in density and/or size fractionation; if autoclave emissions change; if the facility finds that control from road dust is less than 90%; if high levels are found through special monitoring of particulate matter. These conditions should be added to the draft permit.
- On page 20 of the TSD, the facility is only required to remodel for Class I as part of the PSD program. The Band believes that the triggers for remodeling Class II impacts should also serve as triggers to remodel for Class I impacts.

#### AERA

- The deficiencies in PM-10 and PM-2.5 modeling that the Band has identified in this letter also call into question the validity of the AERA modeling. The Band maintains that the modeling for these two pollutants substantially underestimates their predicted concentrations.

- Page 1370 of the TSD Attachments discusses nearby sources included in the AERA. It is interesting that the inventory used in the AERA is not the same as that used for PM-10 and PM-2.5 regulatory modeling. The AERA inventory included Mesabi Nugget (see page 1370, TSD Attachments), whereas Nugget was not included in the ambient air quality modeling done for PM-10 and PM-2.5 (see pages 829 and 867, TSD Attachments). PolyMet excluded Mesabi Nugget from regulatory modeling because they believe that Nugget's emissions are captured by the background concentration from the Virginia monitor. Please explain the discrepancy between these two emission inventories.
- The AERA certification on page 1371 is not signed. The instructions for the form state that the certification should not be signed until the AERA is completed and ready for submittal. Since the certification remains unsigned, it is unclear if this document should be considered complete. If it is not yet complete, it cannot be reviewed properly.

Thank you for your considerations of these comments. We urge the MPCA to take the steps needed to address the issues that we have identified and provide an opportunity for public review and comment on a revised draft permit. This is essential in order for the terms of any air permit for this project to be effective in protecting air quality and complying with the law.

If you have any questions, please call me at 218-878-7108.

Sincerely,



Joy Wiecks

Air Coordinator

Fond du Lac Band

cc. Sean Copeland, Legal Affairs Office Director – Fond du Lac Band  
 Seth Bichler, Staff Attorney – Fond du Lac Band  
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